

3.13 HAZARDS AND HAZARDOUS MATERIALS

This section discusses environmental conditions that are present today for the entire 3,828-acre project site and will be present in the future within the 2,728-acre Inactive Rancho Cordova Test Site (IRCTS). The IRCTS is owned by GenCorp Realty Investments (GenCorp), the parent company of Aerojet General Corporation (Aerojet); activities will be undertaken by Aerojet and McDonnell Douglas Corporation (MDC), a wholly owned subsidiary of the Boeing Company (Boeing), to characterize and remediate contaminants that are present in soil, soil vapor, and groundwater at the IRCTS because of historical uses at the project site. The IRCTS encompasses those lands within the area for Rio del Oro proposed development Phases 2–5 (refer to Chapter 2, “Alternatives,” for further discussion of project phasing). Soil within development Phase 1, owned by Elliott Homes, has been cleared by the California Department of Toxic Substances Control (DTSC) and does not require further cleanup. Remediation of the IRCTS includes ongoing activities that are being carried out under the oversight of DTSC and the Central Valley Regional Water Quality Control Board (RWQCB). These remedial activities are separate actions unrelated to the Rio del Oro project and have been presented to the public by DTSC as a Remedial Action Plan, which includes separate California Environmental Quality Act (CEQA) documentation and public-comment period.

This section also discusses issues associated with mosquito and vector control. Public health and safety issues related to emergency access and response and air quality are discussed in the “Public Services” and “Air Quality” sections of this draft environmental impact report/environmental impact statement (DEIR/DEIS).

3.13.1 AFFECTED ENVIRONMENT

TERMINOLOGY

Under Title 22 of the California Code of Regulations (CCR), a hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness, or may pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed (22 CCR Section 66261.10).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or that are being stored until they can be disposed of properly. Hazardous materials and hazardous wastes are classified according to four properties: toxicity, ignitability, corrosivity, and reactivity (CCR Title 22, Chapter 11, Article 3), as described below.

- ▶ Toxic substances may cause short-term or long-lasting health effects that may be temporary or result in permanent disability or death. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline).
- ▶ Ignitable substances, such as gasoline, natural gas, and hexane (which can be mixed with solvents and used in cleaning products, and which is also found in gasoline and quick-drying glues) are hazardous because of their flammable properties.
- ▶ Corrosive substances, such as sulfuric acid (battery acid) and lye (used in soap-making and a component of liquid drain openers), can damage other materials or cause severe burns upon contact.
- ▶ Reactive substances, such as explosives, pressurized canisters, and pure sodium metal (which reacts violently when exposed to water), may cause explosions or generate gases or fumes.

Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific criteria listed in CCR Title 22. Cleanup requirements are determined on a case-by-case basis by the agency with lead jurisdiction over the project.

A few of the specific terms related to cleanup activities at the project site are defined below.

- ▶ **Remedial Investigation**—An in-depth study designed to determine the nature and extent of contamination at a site (e.g., what hazardous substances are present, how much there is, where it is).
- ▶ **Baseline Risk Assessment**—A study performed to provide risk managers with an understanding of the actual and potential risks to human health and the environment posed by the site, and any uncertainties associated with the assessment.
- ▶ **Feasibility Study**—An in-depth study designed to evaluate the effectiveness and costs of various remedial alternatives for the conditions defined by the Remedial Investigation and Baseline Risk Assessment.
- ▶ **Remedial Action Plan**—A plan, approved by DTSC, that outlines a specific program leading to the remediation of a contaminated site. Once the draft Remedial Action Plan is prepared, a public meeting is held and comments from the public are solicited for a period of no less than 30 days. After the public-comment period has ended and public comments have been responded to in writing, DTSC will generally approve the final remedy for the site (the final Remedial Action Plan). This plan is generally used for large, long-term projects.
- ▶ **Removal Action Workplan**—A plan that is similar to the Remedial Action Plan described above, but that is generally used for small, short-term projects.
- ▶ **Certificate of Completion**—A DTSC document that confirms that the Remedial Action Plan has been completed.
- ▶ **No Further Action**—The decision by DTSC that remedial actions are not necessary because environmental contamination is not present at a site.

REGULATORY AND ENVIRONMENTAL HISTORY

The 3,828-acre Rio del Oro project site includes approximately 2,728 acres of land owned by GenCorp, referred to as the IRCTS (project development Phases 2–5), and approximately 1,100 acres of land owned by Elliott Homes, referred to as the Excluded Area (project development Phase 1) (Exhibit 3.13-1).

Gold-dredging activities took place over approximately 70% of the project site from the early 1900s until 1962. During the later years, from 1940 to 1962, these operations were conducted by the Natomas Company. In 1956, Aerojet purchased the project site from the Natomas Company and leased half of it to the Douglas Aircraft Company (DAC). Aerojet conducted limited testing of explosives and burned waste propellants and chemicals in two small areas within the other half.

In 1961, DAC purchased the entire Rio del Oro project site from Aerojet and established a static rocket assembly and testing facility known as the Sacramento Test Center. DAC constructed numerous structures at seven aerospace complexes and used other small undeveloped areas of the site for small-scale testing and to burn waste propellant. DAC merged with the McDonnell Aircraft Corporation in 1967 to become MDC. Rocket testing occurred at five of the aerospace complexes until 1969, while one complex was used for rocket assembly and one complex was used primarily for administrative and support services. These facilities were held in a state of readiness for rocket testing until 1972. The Sacramento Test Center was deactivated between 1972 and 1977; deactivation included demolition of the test stand superstructures. In 1984, Aerojet reacquired the 3,828-acre project site from MDC and used a small area for the discharge of treated groundwater.



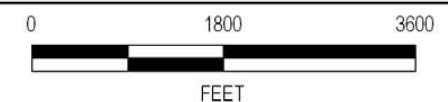
Source: Aerojet 2005, Sacramento County 2002

Map of Areas Subject to Remedial Investigation and Feasibility Study (RI/FS)

Rio del Oro Specific Plan Project DEIR/DEIS
City of Rancho Cordova and USACE

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EXHIBIT 3.13-1



EDAW

The total area actually used by MDC and Aerojet was less than 350 acres of the 3,828-acre project site. More than 90% of the site served as a passive buffer on which no operations took place.

In 1979, trichloroethene (TCE) and other volatile organic compounds (VOCs) were detected in the groundwater on and surrounding the Aerojet National Priorities List (NPL) site north of the IRCTS (north of White Rock Road, in an area not part of the Rio del Oro project site). Investigations indicated that part of the contaminant plume was migrating southwest toward the IRCTS.

In November 1991, DTSC issued an Imminent and Substantial Endangerment Order (ISEO) to Aerojet and MDC to address the issue of TCE in a well located west of the IRCTS. Issuance of the ISEO established the IRCTS as a state Superfund site. Under the ISEO, MDC is responsible for evaluating the potential release of hazardous substances at the IRCTS from MDC historical activities, and Aerojet is responsible because of its ownership of the property. Under the provisions of the 1989 Partial Consent Decree (PCD) between Aerojet, the U.S. Environmental Protection Agency (EPA), and state regulatory agencies, Aerojet is required to address the potential release of hazardous substances at all areas where Aerojet conducted operations. EPA has delegated its authority for soils to DTSC under the ISEO, but has retained its authority for contaminated groundwater migrating from the Aerojet NPL site to the IRCTS.

In 1994, a second ISEO was negotiated with DTSC that superseded the 1991 ISEO. In June 1997, the Central Valley RWQCB issued Cleanup and Abatement Order (CAO) No. 97-093 to Aerojet and MDC for the investigation of perchlorate in groundwater beneath and downgradient of the IRCTS, implementation of corrective action for the perchlorate plume, and monthly sampling of municipal water supply wells at Mather Field for perchlorate analysis. The Boeing Company purchased MDC in 1997, and become responsible for completing MDC's portion of the remedial action work at the project site. Aerojet and Boeing have constructed numerous monitoring wells throughout the Rio del Oro project site, within roadways west of the project site, on private land south of the project site, and throughout the eastern half of Mather Field. In 2000, the Central Valley RWQCB revised the original CAO to implement the recommendations for remedial action as a result of the ongoing investigation of Mather Field, to monitor select municipal wells on a quarterly basis, and to provide for replacement water for affected wells.

EXCLUDED AREA

The Excluded Area encompasses approximately 1,100 acres immediately west of the IRCTS. This area encompasses development Phase 1. The Excluded Area served as a buffer zone and was not used for aerospace testing or other industrial activities (Exhibit 3.13-1).

Aerojet completed an extensive study of the Excluded Area in search of evidence that historical aerospace/industrial activities (postgold mining via dredging) may have resulted in release of chemical contaminants to soil within the area. Findings from Aerojet's study are described in *Site Investigation of the Western Non-Aerospace/Non-Industrial Area at the Inactive Rancho Cordova Test Site* (Hydro-Search 1995). The Hydro-Search report concluded that the Excluded Area did not contain sources of chemical contamination as a result of aerospace/industrial activities. However, evidence of trash from illegal dumping activities (trash and junked cars), empty drums, and oily/tarry soils were encountered at various locations around the perimeter of readily accessible dredge tailings and at a former ranch site. The oily soils were located at the ranch site and contained diesel fuel and motor oil and trace amounts of polychlorinated biphenyls (PCBs). The tarry soils were located along Sunrise Boulevard. Following cleanup activities that included removal of the contaminated soil, trash, junked cars, and drums, DTSC issued a determination in 1997 to redefine the IRCTS to remove the 1,100-acre Excluded Area from the 1994 ISEO. The Excluded Area was purchased by Elliott Homes in 2001.

Although the soil is clean, groundwater beneath the Excluded Area, which is between 100 and 150 feet below the ground surface, is contaminated with VOCs (primarily TCE) and perchlorate. To address DTSC concerns about the contaminated groundwater, Aerojet reserved all rights to water lying below the surface of the Excluded Area

(project development Phase 1) and granted easements to DTSC for the installation of monitoring wells, extraction wells, and pipelines to address the remediation of the contaminated groundwater. These deed restrictions prohibit uses of this groundwater for potable or irrigation-water supply wells without DTSC approval. The sources of potable water for the Rio del Oro project are discussed in detail in Section 3.5, “Utilities and Service Systems,” in the “Water Supply” subsection.

SITE CONTAMINATION

Residual Mercury

Historically, gold mining processes have been shown to generate residual amounts of mercury, which sometimes can occur in concentrations large enough to generate risks associated with human health exposure. The risk to human health is limited to exposure by inhalation. The 2004 EPA Preliminary Remediation Goals (PRGs) list the threshold for inhalation exposure to elemental mercury in ambient air as 0.31 micrograms per cubic meter. The PRG for mercury compounds in soil varies from 18 milligrams per kilogram (mg/kg) for residential conditions to 310 mg/kg for industrial conditions; the PRG for mercury compounds in tap water is 11 micrograms per liter (µg/l). The California drinking-water standard is 2 µg/l for mercury.

Asbestos and Lead

The IRCTS contains numerous concrete, steel, and wood structures that supported the historical rocket testing and assembly activities. These structures were constructed at a time when asbestos-containing materials (ACMs) and lead-based paints were used. Asbestos is designated as a hazardous substance when the fibers have potential to come in contact with air because the fibers are small enough to lodge in the lung tissue and cause health problems. The presence of ACMs in existing buildings poses an inhalation threat only if the ACMs are found to be in a friable state. If the ACMs are not friable, there is no inhalation hazard because asbestos fibers remain bound in the material matrix. Emissions of asbestos fiber to the ambient air, which can occur during activities such as renovation or demolition of structures made with ACMs (e.g., insulation), are regulated in accordance with Section 112 of the federal Clean Air Act.

Human exposure to lead has been determined by EPA and the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) to be an adverse health risk, particularly to young children. Demolition of structures containing lead-based paint requires specific remediation activities regulated by federal, state, and local laws.

Soil and Groundwater

Rocket testing and assembly activities occurred in various locations throughout the 2,728-acre IRCTS, which does not include the 1,100-acre Excluded Area owned by Elliott Homes (i.e., development Phase 1). To structure the study of soil and groundwater within the IRCTS, Aerojet and MDC divided the IRCTS into subareas that are identified as Operable Units (OUs). The OU designations define each study area boundary for the purpose of investigating the presence of chemical contaminants. Operable Units within the IRCTS are listed below, starting with the aerospace OUs. Other OUs are included for other activities that require characterization and potential remediation.

- ▶ Alpha Complex
- ▶ Beta Complex
- ▶ Kappa/Gamma Complex
- ▶ Sigma Complex
- ▶ Sigma Debris Area
- ▶ DM14 Assembly Area
- ▶ Circular Feature

- ▶ Propellant Burn Area
- ▶ Metal-Lined Hole
- ▶ Antenna Station
- ▶ GET F Sprayfield
- ▶ Municipal Landfill (White Rock Dump No. 1)
- ▶ Rice Hull Ash Area
- ▶ By-Dry Site
- ▶ Central Area

An additional OU within the IRCTS, the Administration Area (Security Park), is outside of the Rio del Oro project site. Because it is not part of this project, it is not discussed further in this DEIR/DEIS.

Soil investigations at each of the OU study areas included the collection of soil, soil vapor, and/or sediment samples. The samples were analyzed for VOCs, semivolatile organic compounds, metals, hydrazine, nitrosodimethylamine, PCBs, perchlorate, and/or kerosene. As detailed below, soil at the IRCTS has been contaminated with TCE, freon, methylene chloride, kerosene, perchlorate, dioxins and furans, lead, and other metals. Groundwater beneath the IRCTS has been contaminated with VOCs (primarily TCE) and perchlorate. The information presented below was obtained from the *Elliott Homes, Inc., Revised Hazardous Materials Technical Study for the Inactive Rancho Cordova Test Site and Associated Lands* (ERM 2003), which provides a summary of Aerojet and MDC documents prior to 2003; from various additional Aerojet and MDC documents that have been prepared since 2003; and from discussions with the Aerojet project manager for the IRCTS (Fricke, pers. comm., 2005 and 2006).

Alpha Complex

The Alpha Complex consisted of two test stands, an Initial Operational Capability (IOC) test area, a blockhouse, and support buildings on approximately 50 acres. The complex was originally used for static firing of the Thor liquid rocket. Thor rockets used liquid oxygen and a refined kerosene fuel. TCE was used to clean rocket engine assemblies. During static firing, large quantities of water were used to reduce heat and noise generated by the rocket engine. The water containing TCE was captured in a collection basin that discharged to a nearby drainage. Wastewater was discharged via a septic tank and leach field. Investigative studies determined that TCE, Freon-113, perchloroethylene (PCE), cis-1,2-DCE, methylene chloride, perchlorate, and kerosene are the principal contaminants of concern found in soil and groundwater. A soil vapor extraction system has been operating at the Alpha Complex since 2002 to remove VOCs from the soil. A Feasibility Study is in progress to address perchlorate in soil and contaminants in groundwater.

Beta Complex

The Beta Complex includes approximately 120 acres that contained two rocket test stands and support facilities that were used for static firing of the Saturn S-IVB liquid rocket engine. Saturn S-IVB rocket engines used liquid oxygen and liquid hydrogen as fuels. Assembly of the engines is reported to have involved the use of small quantities of TCE for cleaning purposes. During firing, large quantities of water were used to reduce heat and noise generated by the motor. Following a review of analytical data demonstrating that contaminants of concern were largely absent or occurred at levels below environmental and human-health thresholds, DTSC approved a No Further Action designation for the Beta Complex in 2002.

Kappa/Gamma Complex

The Kappa/Gamma Complex includes approximately 30 acres. Earliest operations at this area began in 1958 as the second IOC area, which consisted of facilities for testing the deployment of the Thor rocket under stormy weather conditions. Static firing did not occur at IOC-2. Solvents may have been used to cleanse the engine after the rocket was loaded with kerosene, which may have been burned in a small pit west of the facility.

Following IOC-2 decommissioning in 1961, the Kappa Complex was constructed for development and testing of hydrogen components. Gaseous nitrogen, liquid hydrogen, liquid argon, liquid nitrogen, and helium were used.

The Gamma Complex was constructed in 1964 for evaluation of the use of self-igniting propellants and testing of engines and supply systems. Hydrazine fuels, nitrogen tetroxide, gaseous helium, and gaseous nitrogen were used.

Testing activities generated wastewater that was channeled to concrete-lined burn basins. After chemicals floating on the surface of the wastewater were burned off, the remaining fluids were pumped to an unlined percolation pond that contained several deep, dry wells to enhance the percolation of wastewater into the soil. Currently, shallow soil within the Kappa/Gamma Complex contains VOCs. DTSC approved a Remedial Action Plan for institutional control (land use restrictions) in January 2006. These land use restrictions would be defined before development of this area.

Sigma Complex

The Sigma Complex includes approximately 25 acres that were used for static firing of solid-rocket motors. The Sigma Complex was later the site of “hogout” operations that involved removing solid-rocket fuel from rocket motors using a high-pressure water knife. Effluent from the hogout activities was diverted into two unlined ponds. The effluent contained pieces of solid-rocket propellant and would have dissolved ammonium perchlorate from the fuel. The recovered solid-rocket propellant was removed from the effluent and burned at the Propellant Burn Area (discussed below). The Baseline Risk Assessment concluded that perchlorate in the shallow soil at the Sigma Complex did not occur at concentrations that would pose a risk to human health. However, perchlorate concentrations in deeper soil were found to increase with depth and would continue to affect groundwater. A Feasibility Study is being prepared to evaluate potential remedial actions for deep soil and to minimize further impacts of perchlorate on regional groundwater.

Sigma Debris Area

The Sigma Debris Area includes an approximately 5-acre depression created during gold-mining activities. The depression was used by MDC for limited disposal of inert material during the demolition of the facility, and by persons not associated with aerospace activities. The inert debris is composed of scattered drums, construction and demolition debris, food cans, and glassware. Signs of burning were also observed. The area is reported to have received its name from its proximity to the Sigma Study Area. The Remedial Investigation did not identify any contaminants of concern at this site. The Central Valley RWQCB concurred with these findings but recommended the removal of the debris before future site development.

DM-14 Assembly Area

The DM-14 Assembly Area includes approximately 20 acres that were used for assembly and painting of Genie solid-rocket motors. There were three buildings, totaling approximately 15,000 square feet, that were surrounded on three sides by earthen berms to prevent damage in case of an explosion. Sampling data indicated that Freon-113, probably from a shallow sump that historically received liquid waste from the painting activities, was the principal contaminant of concern. In addition, PCBs in soil associated with a pole-mounted transformer were identified as a potential human-health risk for future residential housing. Remedial Investigations/Baseline Risk Assessments are in progress. Some form of institutional control, such as a land use restriction, may be required for development in this area.

Circular Feature

The Circular Feature is a 400-foot-diameter area on top of a ridge of dredge tailings that was reported to have been used by Aerojet for Card Gap Testing of small quantities of energetic material during the late 1950s and by DAC during the early 1960s for the explosive/burning characterization of liquid hydrogen. A personnel bunker was constructed about 500 feet north of the site. Soil samples and analytical testing showed no evidence of soil

contamination at this site. In 2002, DTSC and the Central Valley RWQCB approved a No Further Action determination for this site.

Propellant Burn Area

The Propellant Burn Area includes approximately 9 acres of dredge tailings where liquid and solid-rocket propellants and chemicals were burned. The Propellant Burn Area was used intermittently between 1957 and 1963. Solid-rocket propellants, containing ammonium perchlorate, aluminum, and some heavy metals, were transported to the Propellant Burn Area either within the existing motor casings or as fragments from the hogout operations (described above) and burned in stacks on the ground along with the containers of chemicals. Liquid propellants were burned in metal troughs. As a result of the burning activities, shallow soils are contaminated by dioxins and perchlorate at levels above residential PRGs and by perchlorate and TCE in deeper soils. A Remedial Action Plan has been approved by DTSC for shallow soils, and removal of soils contaminated with dioxin began in August 2005. These soils were transported to the Forward Landfill in Manteca, California. Additional soils were removed to the landfill during October 2005.

Metal-Lined Hole

The Metal-Lined Hole area occupies an approximately 1- to 2-acre location that contains two 80-foot circular concrete curbs and a 1.8-foot-diameter by 9-foot-deep vertical steel pipe surrounded by a 6-foot-square concrete pad (36 square feet), approximately 1 foot thick. The Metal-Lined Hole was originally found to be full of an oily fluid of unknown origin. The oily fluid was pumped into three drums by MDC for proper off-site disposal. The Metal-Lined Hole was filled with bentonite and capped with a layer of cement. The site was leased to Cetec Antenna Company in 1978 and was subsequently decommissioned during the late 1980s. The Metal-Lined Hole was used for a vertical antenna array and the concrete curbs were used for horizontal antenna arrays. The Final Remedial Action Plan for this site indicated that the trace VOC concentrations of limited extent near the site did not warrant further remedial actions. The Final Remedial Action Plan was approved by DTSC in December 2000.

Antenna Station

The Antenna Station is an approximately 1-acre location within a dredge pit. The station comprises a satellite dish and control building at the bottom of the pit, along with a sump to remove water and a small transmission tower near the top of the pit. The station was constructed during the late 1970s—possibly in 1977, based on the absence of the facility in a 1973 aerial photograph, its presence in a 1978 photograph, and a power pole with “77” nailed on to it. The dredge pit is dry following years of low to normal precipitation; however, following years of high precipitation, the pit becomes inundated. VOCs were detected at extremely low levels, well below residential PRGs, and could be laboratory artifacts. The Antenna Station is not considered to be a source of contamination and was recommended for the No Further Action designation (ENSR International 2004). DTSC concurred with this recommendation in April 2005.

GET F Sprayfield

The GET F Sprayfield includes approximately 30 acres that were used for the disposal of approximately 1.6 billion gallons of treated groundwater from the Sector F groundwater extraction and treatment (GET F) facility located on the north side of White Rock Road. The sprayfield was operated by Aerojet from December 1984 through February 1990 and from late July through September 1990. The GET F facility used air stripping technologies to remove VOCs from groundwater. However, at the time that the sprayfield was in operation, perchlorate was not regulated and treatment technology was not available; thus the subsurface soils at the GET F Sprayfield became contaminated with low levels of perchlorate. The remedial investigation of perchlorate began in 2005.

Municipal Landfill (White Rock Dump No. 1)

White Rock Dump No. 1 includes approximately 5 acres that were operated as a burn dump for municipal refuse disposal. According to County of Sacramento (County) records, the County contracted with a private individual to operate the dump between November 1955 and July 1957. However, a review of aerial photographs indicates that the dump had already been established by 1952. After burning, ash and noncombustible materials were pushed into piles along the eastern and southern sides of the dump. Analysis of soil samples indicated that lead is the primary contaminant of concern, although cadmium and nickel are also present at concentrations above their respective residential PRGs. The County is responsible for completing the remediation work. Pending DTSC approval of the Remedial Action Plan, the dump site will be covered with clean soil to a depth of 5 feet, which would prevent public access to any dump site materials. The site is proposed as a park adjacent to an open-space preserve designated under the Rio del Oro project.

Rice Hull Ash Area

The Rice Hull Ash Area includes approximately 25 acres that were used by the Beagle Products Company from the late 1940s through the mid-1960s to burn rice hulls. The site was leased to Greasweep Western in 1983, which mined and bagged the rice hull ash and sold it for use as an oil absorbent. Following soil testing, DTSC concurred in 2001 that the rice hull ash did not fall under the category of a hazardous waste. Greasweep Western ceased its operations in spring 2005. Soil tests indicated that the rice hull ash could be used as a soil amendment during future development activities to improve the texture and moisture retention capacity of clay soils at the project site. Alternatively, the ash could be hauled off-site and disposed of in a landfill.

By-Dry Site

The By-Dry site was originally used as a feed products facility, which included storage and processing of raw materials for compost, feeds, and fertilizer. Fertilizer was produced using tomato skins and an on-site kiln was used to produce bone meal. The feed products facility operated from the mid-1950s through 1983. Aerojet completed a Remedial Investigation in November 2005 to identify and delineate the vertical and horizontal extent of any contamination that may be present or to address any minor impacts that may have resulted from nonaerospace activities. Piles of ash were found along the northwestern fence. The primary contaminants of concern include dioxins and lead. Aerojet has submitted a Removal Action Workplan to DTSC and will transport the material to a landfill. Because the site also has a shallow water-supply well that generates clean water, other contamination is not expected. The By-Dry site is currently used by the Clark Cattle Company as headquarters for its operations at the Rio del Oro project site.

Central Area

The Central Area Operable Unit is composed of the buffer lands that separate the above discussed OUs, and equates to the vast majority (nearly 2,000 acres) of the total 2,728-acre IRCTS. Aerojet completed a Remedial Investigation in November 2005 to confirm the absence of any impacts or to address any minor impacts that may have resulted from nonaerospace activities. Remedial actions will not be required for the vast majority of these buffer lands.

CLEANUP PROCESSES

Environmental investigation and cleanup at the project site have been and will be conducted under the 1994 ISEO from DTSC with extensive input from the Central Valley RWQCB. Although the 1997–2000 CAO from the Central Valley RWQCB applies to the IRCTS, most of the CAO has been applied to the western boundary of the project site and areas farther downgradient. Remedial actions at the project site consist of soil and groundwater treatment and are the responsibility of Aerojet and/or MDC (Boeing) and, in the case of White Rock Dump No. 1, the County. The City of Rancho Cordova (City) and the project applicant(s), including future developers in the

proposed Rio del Oro Specific Plan area, have no responsibility to participate in or oversee these activities and will not take possession of properties involved in cleanup until remediation has been completed to levels required by state law.

As described above, geography was the primary basis for defining an Operable Unit (OU) even though remediation goals and treatment processes may be similar. The remediation process for each OU begins with a baseline survey to identify the types and locations of contamination, called a Remedial Investigation. If contamination is not found, DTSC issues a No Further Action determination. If contamination is found, a Baseline Risk Assessment is prepared, and is then followed by a Feasibility Study, which evaluates alternatives for cleanup. A Remedial Action Plan is then prepared for the OU. A Removal Action Workplan may be prepared for the small projects. These plans identify the selected cleanup process(es) and proposed timeline(s) that will be used, and is reviewed by the appropriate regulatory agencies and members of the public. A CEQA Initial Study/Negative Declaration or Mitigated Negative Declaration is included as an appendix in the Remedial Action Plan with a concurrent public-review period. Following regulatory agency approval of the Remedial Action Plan, the actual cleanup activities can begin. As indicated in Table 3.13-1, some cleanup activities take only a few years to complete; others, such as full remediation of groundwater, will continue for decades. When remediation is complete to an established level such that health risks are reduced to an acceptable level, DTSC will issue a Certification of Completion.

Groundwater Cleanup

Groundwater investigations at the project site have been ongoing since 1984 to characterize the site's hydrogeology, evaluate the direction of groundwater flow, and assess the extent of groundwater contamination. The project site has been subdivided into three separate groundwater study areas (Exhibit 3.13-2) based on the sources of chemicals and their potential effects on the groundwater, as discussed below.

Western Groundwater Operable Unit

The Western Groundwater Operable Unit (WGOU) includes the northern portion of the Excluded Area (development Phase 1) (Exhibit 3.13-2). This area was designated to address chemicals in the groundwater originating from the GET F Sprayfield and the Aerojet NPL site located north of White Rock Road. One former domestic well, one inactive GET well, and 16 monitoring wells have been installed at 17 locations in the WGOU. Sampling data indicate that VOCs (primarily TCE) and perchlorate are the primary chemicals of concern in the groundwater, and that the direction of groundwater flow is primarily toward the west-southwest. The migration of this groundwater is controlled by several extraction wells and a treatment system at locations west of Sunrise Boulevard. The domestic well and monitoring wells are measured for water levels on a semiannual basis and water samples are collected periodically for laboratory analysis to track the movement of the contaminant plumes.

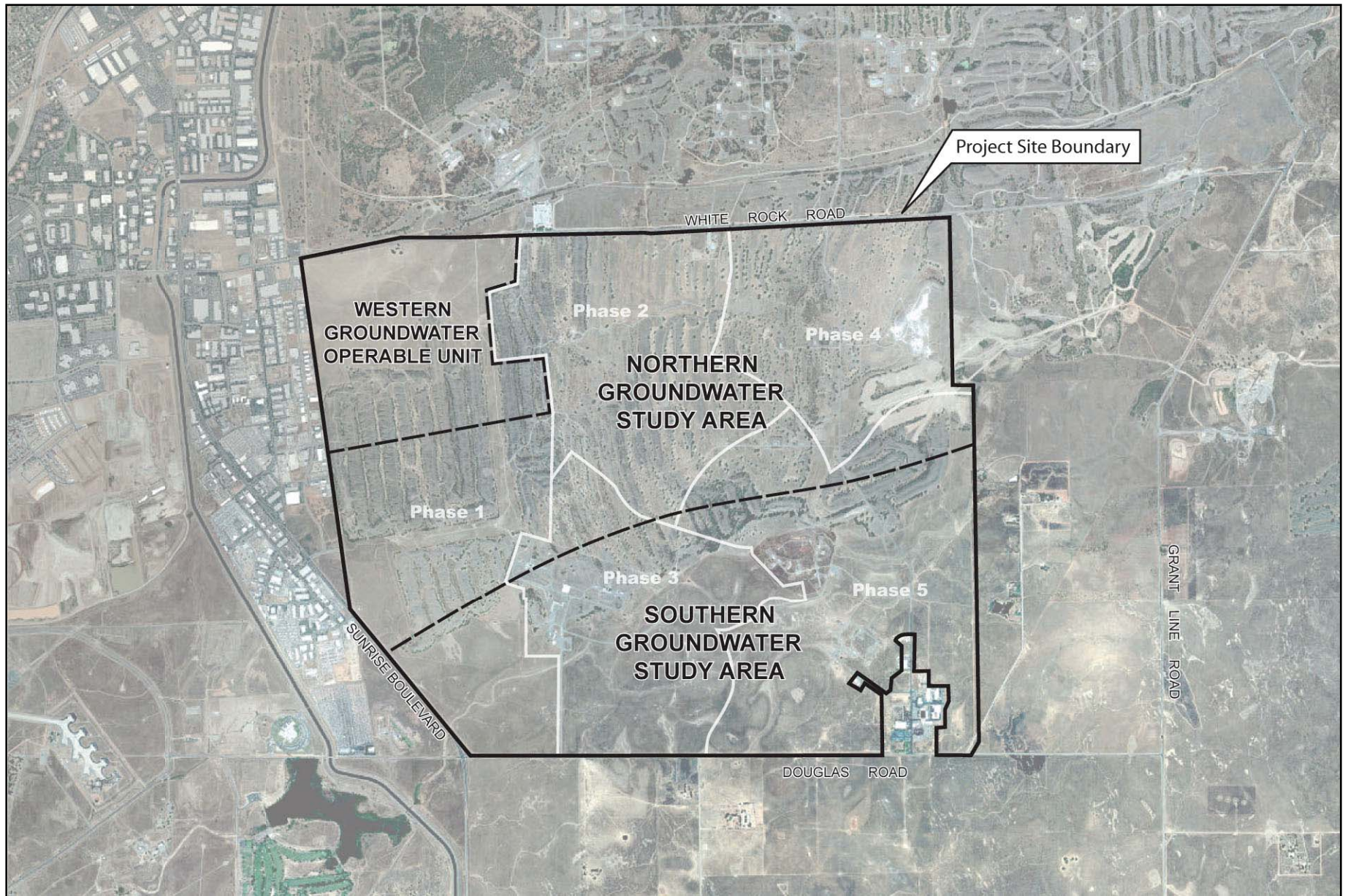
Although the WGOU is located within the 1,100-acre Excluded Area, which was removed from provisions of the 1994 ISEO issued for the IRCTS, the Grant Deed for the property in the Excluded Area prohibits the public from using the contaminated groundwater without approval from DTSC. As such, drilling into groundwater by future Rio del Oro landowners would be considered a trespass of Aerojet's "Water Estate" and the easements granted to DTSC for monitoring wells, extraction wells, and pipelines.

Northern Groundwater Study Area

The Northern Groundwater Study Area (NGSA) includes the central portion of development Phase 1 and all of development Phases 2 and 4 of the Rio del Oro project (Exhibit 3.13-2). This area was designated to address chemicals in the groundwater originating from the Propellant Burn Area, Sigma Complex, and the DM-14 Assembly Area, as well as the Aerojet NPL site located north of White Rock Road. One active domestic well, three inactive water-supply wells, three inactive GET wells, and 63 monitoring wells (70 total) have been installed at 61 locations in the NGSA. Sampling data indicate that VOCs (primarily TCE) and perchlorate are the

Summary of Primary Study Areas, Primary Constituents of Concern, and Regulatory and Investigation Status on the Rio del Oro Project Site

IRCTS Primary Study Areas and Responsible Company	Primary Constituents of Concern		Regulatory and Investigation Status and Schedule					
	Soil and/or Sediment	Groundwater	RI Workplan	RI Completed	BRA Completed	FS Completed	RAP Completed	RD Completed
McDonnell Douglas Corporation/Boeing Corporation								
DM-14 Assembly Area	Freon-113 Other VOCs	TCE Perchlorate	October 1996	June 2005	June 2005	NA	NFA	NA
Alpha/IOC-1 Complex	TCE PCE Methylene chloride Cis-1,2-DCE Freon-113 Kerosene	TCE Perchlorate	May 1997	July 2002	July 2002	June 2005	2006; RAW approved November 2001 (soil vapor extraction)	2006
Beta Complex	None	NA	May 2000	October 2001	NFA	NFA	September 2002	NFA
Kappa/Gamma/IOC-2 Complex	TCE Methylene chloride Freon-113	NA	August 1996	February 2000	February 2000	NA	January 2006 (institutional controls)	NA
Sigma Complex	Perchlorate	Perchlorate	June 1997	October 2002	October 2002	June 2005	2006	2007
Southern Groundwater Study Area	NA	TCE Perchlorate	April 1998	June 2003	December 2004	June 2005	2006	2007
Aerojet General Corporation								
GET F Sprayfield	Perchlorate	Perchlorate	2006	TBD	2007	2007	TBD	TBD
Aerojet General and McDonnell Douglas/Boeing Corporations								
Propellant Burn Area	Perchlorate Dioxins & Furans	TCE Perchlorate	June 1995	May 2000 (revised)	September 1998	September 2001	September 2002	September 2003
Circular Feature	None	NA	July 1996	June 2002	NFA	NFA	September 2002	NFA
Northern Groundwater Study Area	NA	TCE Perchlorate	April 1998	February 2003	December 2004	June 2005	2006	2007
Aerojet General Corporation and Sacramento County								
Municipal Landfill (White Rock Dump No. 1)	Lead Other Metals	NA	August 2002	June 2004	March 2005	July 2005	2006	2007
Notes: BRA = Baseline Risk Assessment; FS = Feasibility Study; IRCTS = Inactive Rancho Cordova Test Site; NA = Not applicable; NFA = No Further Action; PCE = tetrachloroethene; RAP = Remedial Action Plan; RAW = Removal Action Workplan; RD = Remediation Design; RI = Remedial Investigation; TBD = To be determined; TCE = trichloroethene Sources: ERM 2003; Fricke, pers. comm., 2005 and 2006								



Source: ERM 2003

Groundwater Study Area

EXHIBIT 3.13-2

primary chemicals of concern in the groundwater, and that the direction of groundwater flow is primarily toward the west-southwest. A Feasibility Study and a Baseline Risk Assessment were submitted to DTSC and the Central Valley RWQCB in 2004. (The Southern Groundwater Study Area was also addressed by these documents.) A revised Feasibility Study was submitted in June 2005 and in April 2006 in response to comments from DTSC and the Central Valley RWQCB. The Remedial Action Plan is in progress. The monitoring wells are measured for water levels on a semiannual basis and water samples are collected periodically for laboratory analysis to track the movement of the contaminant plumes.

Southern Groundwater Study Area

The Southern Groundwater Study Area (SGSA) includes development Phases 3 and 5 of the Rio del Oro project (Exhibit 3.13-2). This area was designated to address chemicals in the groundwater originating from the Alpha Complex and the Administration Area (Security Park). Three water-supply wells (one active and two inactive), three GET wells, and 49 monitoring wells (55 total) have been installed at 47 locations within the SGSA, excluding the Security Park and the area south of Douglas Road. Note that one supply well, two GET wells, and 21 monitoring wells (24 total) are located within the wetland preserve at 21 locations. The supply wells are owned by the California-American Water Company and the active supply well provides water to the businesses in the Security Park.

Sampling data indicate that VOCs, primarily TCE and perchlorate, are the primary chemicals of concern in the groundwater, and that the directions of groundwater flow vary from south at the Security Park to southwest at other locations further west. The active supply well has not been affected by these chemicals.

DTSC approved an interim Remedial Action Plan in January 2006 for the initial operation of a groundwater control system while work continues on the sitewide groundwater Feasibility Study (NGSA and SGSA). One extraction well and a temporary GET system were installed during 2004 at the intersection of Douglas Road and the entrance to the Beta Complex. The GET system began operating on a limited basis during July 2005 and began continuous operations in October 2005. Two additional extraction wells were installed along Douglas Road during 2005 and will be connected to the temporary GET system along with extraction wells south of Douglas Road (on land that is part of the Sunrise Douglas Community Plan area) to remediate contaminated groundwater moving south from the Security Park.

Soil Cleanup

Cleanup processes that are being used or are proposed for use with contaminated soils focus on the excavation of shallow soil, the isolation of soils, and the removal of contamination through other processes. Soil vapor extraction is one technique being used to remove VOCs in deep soil. In this technology, a vacuum is applied through wells drilled near the source of contamination in the soil. Volatile constituents of the contaminated soil “evaporate” and the vapors are drawn toward the extraction wells. Extracted vapor is then treated as necessary (commonly with carbon adsorption) before being released to the atmosphere. The increased air flow through the subsurface can also stimulate biodegradation of less volatile petroleum hydrocarbons. Other treatment methods include physical removal of the soil and disposal at a landfill permitted to accept classified hazardous wastes, or, in certain public use areas, covering the contaminated area to a depth of at least 5 feet with a clean soil “cap.”

MOSQUITO/VECTOR CONTROL

The mosquito population in the Sacramento Valley is most active in the spring and early summer. The female mosquito needs blood in order to produce eggs. Hosts that can supply blood include reptiles, amphibians, mammals, birds, and humans. All mosquito species are potential vectors of organisms that can cause disease to pets, domestic animals, wildlife, or humans.

The project site is located within the Sacramento-Yolo Mosquito and Vector Control District (District). The District employs technicians certified by the Vector-Borne Disease Section of the California Department of Health Services (DHS) in pesticide usage, and mosquito and vector identification. The District solves mosquito problems using Integrated Pest Management techniques, which include surveillance and monitoring of mosquito breeding sources, reduction of mosquito breeding sites, community outreach and public education, and the use of chemical and biological methods to control both mosquito larvae and adult mosquitoes (Sacramento-Yolo Mosquito and Vector Control District 2006). The District's mosquito control program is contained in its *Mosquito and Mosquito-Borne Disease Management Plan* (adopted 2003, amended 2005) (Sacramento-Yolo Mosquito and Vector Control District 2003).

The District applies chemicals at extremely low rates, as recommended by the U.S. Environmental Protection Agency (EPA). Pesticides in use include biological controls, such as *Bacillus* sp.; methoprene, an insect growth regulator; and pyrethrins and pyrethroids, all of which have been evaluated and are regulated by EPA. Biological larvicides include *Bacillus thuringiensis israelensis* (*Bti*) and *Bacillus sphaericus* (*B*), which are naturally occurring bacteria. EPA indicates that the microbial pesticides *Bti* and *B. sphaericus* have undergone extensive testing before registration. They are essentially nontoxic to humans, so there are no concerns about human health effects with *Bti* or *B. sphaericus* when they are used according to label directions. EPA testing also indicates that there are no risks to wildlife, nontarget species, or the environment associated with these microbial pesticides, when used according to label directions (EPA 2006a). Only mosquitoes, black flies, and certain midges are susceptible to these bacteria. Other aquatic invertebrates and nontarget insects are unaffected. Larvicidal oils and monomolecular films are used to drown the mosquito larvae in their later aquatic stages, when they are not feeding, by forming a thin coating on the surface of the water. For example, methoprene is an insect growth regulator that is target-specific and is designed not to harm mammals, waterfowl, or beneficial predatory insects.

EPA also indicates that pyrethroids can be used for public health mosquito control programs without posing unreasonable risks to human health when applied according to the label. They also do not pose unreasonable risks to wildlife or the environment, although pyrethroids are toxic to fish and to bees. For that reason, EPA has established specific precautions on the label to reduce such risks, including restrictions that prohibit the direct application of products to open water or within 100 feet of lakes, streams, rivers, or bays (EPA 2006b). The District uses pyrethrins and pyrethroids for its adult mosquito fogging program in and around populated areas. Pyrethrins are insecticides that are derived from an extract of chrysanthemum flowers, and pyrethroids are synthetic forms of pyrethrins. These are generally applied by truck-mounted or handheld foggers. These materials used to control both adult and larval mosquitoes are registered with EPA, which evaluates safe use by assessing potential human health and environmental effects associated with use of each product (EPA 2006c).

3.13.2 REGULATORY FRAMEWORK

Although numerous federal, state, and local laws and regulations pertaining to hazardous waste management are applicable to remedial activities at the project site, conformance with these laws and regulations is addressed through separate environmental review and regulatory oversight specifically associated with the remedial activities. These remedial activities are separate actions that are not part of the proposed Rio del Oro project.

Federal, state, and local laws and regulations that would apply to construction and operational activities as part of the project are listed below.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Hazardous Materials Handling

At the federal level, the principal agency regulating the generation, transport, and disposal of hazardous substances is EPA, under the authority of the Resource Conservation and Recovery Act (RCRA). The RCRA established an all-encompassing federal regulatory program for hazardous substances that is administered by

EPA. Under the RCRA, EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. The RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments of 1984 (HSWA), which specifically prohibits the use of certain techniques for the disposal of various hazardous substances. The Federal Emergency Planning and Community Right to Know Act of 1986 imposes hazardous-materials planning requirements to help protect local communities in the event of accidental release. EPA has delegated much of the RCRA requirements to DTSC.

Worker Safety Requirements

The U.S. Department of Labor, Occupational Safety and Health Administration is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Hazardous Materials Handling

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires preparation of Hazardous Materials Business Plans and disclosure of hazardous-materials inventories. A Business Plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies, including the County Department of Environmental Management and the City, administer these laws and regulations.

Worker Safety Requirements

The California Occupational Safety and Health Administration (Cal-OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within California. Cal-OSHA regulations pertaining to the use of hazardous materials in the workplace, as detailed in CCR Title 8, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and preparation of emergency action and fire prevention plans. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous-waste sites. The hazard communication program requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous-materials incidents is one part of this plan. The plan is managed by the Governor's Office of Emergency Services (OES), which coordinates the responses of other agencies including the California Environmental Protection Agency, California Highway Patrol, California Department of Fish and Game, Central Valley RWQCB, County Sheriff's Department, and City Police and Fire Departments.

Hazardous Materials Transport

The U.S. Department of Transportation regulates transportation of hazardous materials between states. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous

materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. Together, these agencies determine container types used and license hazardous-waste haulers for transportation of hazardous waste on public roads.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The County is responsible for enforcing the state regulations that govern hazardous-substance generators, hazardous-substance storage, and underground storage tanks (including inspections, enforcement, and removals).

Rancho Cordova General Plan

Goals and policies from the *Rancho Cordova General Plan* relating to hazards and hazardous materials that the City has found to be applicable to the proposed project and alternatives under consideration are provided in Appendix F.

Local Regulatory Authority for Remedial Activities at the Project Site

Under the 1994 ISEO issued to Aerojet and MDC, the DTSC and Central Valley RWQCB have regulatory authority over studies to determine the character and extent of chemicals that are found to originate in soil and groundwater beneath the IRCTS. Under the 1997 CAO (revised 2000), the Central Valley RWQCB has regulatory authority over the occurrence of perchlorate beneath the IRCTS and over the off-site migration of perchlorate. In addition, EPA, DTSC, and the Central Valley RWQCB have regulatory authority over chemicals that originate from the Aerojet NPL site and have migrated into groundwater beneath the IRCTS. Other agencies with regulatory authority include the Sacramento Metropolitan Air Quality Management District (for emissions into the atmosphere) and the County Environmental Management Department (for well construction permits and hazardous-materials plans).

In 1991, DTSC issued an Imminent and Substantial Endangerment and Remedial Action Order to Aerojet and MDC that required them to perform activities necessary to investigate and remediate contamination present in soil and groundwater beneath the IRCTS. The 1991 order was replaced in 1994 by DTSC's issuance of an Imminent and Substantial Determination and Consent Order. The 1994 order clarified the regulatory requirements for the Remedial Investigation/Feasibility Study process and remediation of contaminants in soil, soil vapor, or groundwater at the IRCTS.

The regulatory framework for contaminant studies within the IRCTS is structured from the following three documents:

- ▶ June 1989 Partial Consent Decree (PCD), which directs EPA, DTSC, the Central Valley RWQCB, and Aerojet on issues related to contaminants in groundwater from the Aerojet NPL site that have migrated beneath the IRCTS;
- ▶ June 1994 Imminent and Substantial Endangerment Order (ISEO), which directs DTSC, Aerojet, and MDC on issues related to contaminants in soil, soil vapor, and groundwater beneath the IRCTS; and
- ▶ June 1997 (revised September 2000) Cleanup and Abatement Order (CAO), which directs the Central Valley RWQCB, Aerojet, and MDC on issues related to perchlorate in groundwater beneath the IRCTS and the off-site migration of perchlorate.

The first document obligates Aerojet to perform studies and collect data sufficient for EPA, DTSC, and the Central Valley RWQCB to verify the character and extent of contaminants in groundwater from the Aerojet NPL site. The next two documents obligate Aerojet and MDC to complete activities required to reduce the concentration of contaminants to levels that DTSC and the Central Valley RWQCB find to be protective of human health and the environment. The PCD and the ISEO include community participation guidelines. Both

documents are available for public review at the DTSC office, located at 8800 Cal Center Drive in Sacramento, California. The CAO is available for public review at the Central Valley RWQCB office, located at 11020 Sun Center Drive, Suite 200, Rancho Cordova, California.

Chemicals could currently be present in soil and groundwater within the IRCTS (development Phases 2–5) at concentrations exceeding thresholds defining hazardous wastes or threats to human health as defined by regulations contained in CCR Title 22. Development of the aerospace OUs within project development Phases 2–5 cannot occur until DTSC issues a Certification of Completion to Aerojet and MDC for the OUs within each development phase.

3.13.3 ENVIRONMENTAL CONSEQUENCES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a hazards and hazardous materials impact is considered significant if implementation of the proposed project and alternatives under consideration would do any of the following:

- ▶ create a public-health hazard through the use, production, generation, release, or disposal of materials that pose a hazard to human, animal, or plant populations;
- ▶ expose construction workers to hazardous materials that would create health risks during construction; or
- ▶ create a health or potential health hazard;
- ▶ be located on a hazardous materials site that is included on the list generated by Government Code Section 65962.5 (Cortese List);
- ▶ create a safety hazard for people living or working in the project area as a result of a project located within an airport land use plan or within 2 miles of a public airport, or in the vicinity of a private airstrip;
- ▶ impair implementation of interfere with an adopted emergency response plan; or
- ▶ expose people to a significant risk of loss, injury, or death from exposure to wildland fires.

The project site is not a hazardous materials site that is contained within the Cortese List. Hazards related to proximity to airports are evaluated in Section 3.1, “Land Use,” and Section 3.16, “Noise.” The project’s potential impacts related to emergency response and emergency access are evaluated in Section 3.6, “Public Services.” Finally, because the project site is not located within a wildland fire hazard zone, that impact is not discussed further in this DEIR/DEIS.

As control of areas where remediation occurred is transferred from Aerojet to developers and future property owners, they would become subject to all City and County requirements relating to the use, handling, transport, and disposal of hazardous materials that may be used during construction or operation of the Rio del Oro project.

ANALYSIS METHODOLOGY

This analysis is based on a site visit, discussions with Aerojet, and a review of the following documents:

- ▶ *Elliott Homes, Inc., Revised Hazardous Materials Technical Study for the Inactive Rancho Cordova Test Site and Associated Lands*, Environmental Resources Management (ERM), March 2003 (ERM 2003);

- ▶ *Aerojet-General Corporation, Draft Assessment Report and RI/FS Workplan for the Central Area Operable Unit Inactive Rancho Cordova Test Site*, Sacramento, California, ERM-West, Inc., October 2004 (ERM-West 2004); and
- ▶ *The Boeing Company and Aerojet General Corporation, Inactive Rancho Cordova Test Site (IRCTS), Draft Baseline Risk Assessment for the Northern and Southern Groundwater Study Areas*, ENSR International, December 2004 (ENSR International 2004).

IMPACT ANALYSIS

Program Level Impacts and Mitigation Measures

Effects that would occur under each alternative development scenario are identified as follows: PP (Proposed Project), HD (High Density), IM (Impact Minimization), NF (No Federal Action), and NP (No Project). The impacts for each alternative are compared relative to the PP at the end of each section impact conclusion (i.e., similar, greater, lesser).

IMPACT 3.13-1

Possible Exposure to Contaminated Soil or Groundwater. *Construction workers or future residents would not be exposed to contaminated soil or groundwater.*

PP, HD, IM,
NF

Project development of some aerospace OUs within the 2,728-acre IRCITS (Rio del Oro development Phases 2–5) would be limited by the presence of contaminated soils until Aerojet and/or MDC completes investigation and cleanup activities within each OU. DTSC will issue a Certification of Completion when soil cleanup activities are complete, indicating that risks to human health and the environment have been found to be at or below minimum threshold levels. Studies performed at the request of Aerojet (Borch 1995a, 1995b) found that the dredge tailings at the project site do not contain toxic levels of trace elements (such as mercury). As discussed in Impact 3.13-6 below, soils in the 1,100-acre development Phase 1 area are not contaminated. Therefore, construction workers and future residents and employees associated with project development would not come into contact with contaminated soil. DTSC will also include deed restrictions on future development that will prohibit residential or commercial use of groundwater beneath the project site. Construction workers associated with project development would not come into contact with contaminated groundwater because groundwater levels typically range between 50 and 160 feet below the current ground surface, and project-related excavation activities would not exceed depths of 15–20 feet. Therefore, there would be **no direct** or **indirect** impacts arising from human exposure to contaminated soil or groundwater. *[Similar]*

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. Aerojet and/or MDC are required to complete cleanup actions related to soil and groundwater pursuant to the requirements of DTSC and Central Valley RWQCB (EPA for groundwater only in the northeastern NGSAs) regardless of whether the project is implemented and regardless of whether mining is occurring. According to the *Aerojet Mining Amendment Mitigated Negative Declaration* (City of Rancho Cordova 2004) and the *Grantline West Mitigated Negative Declaration* (City of Rancho Cordova 2005), the Aerojet mining site in the eastern portion of the project site is within 250 feet of the Alpha Complex, which was built and operated by MDC to test rocket engines. TCE was used to clean engine parts and has been found in soil and groundwater beneath the Alpha Complex. However, the Alpha Complex site is fenced, and available data from soil and groundwater testing indicate that TCE contamination does not

extend to near-surface soil east of the fenced complex, where the current Teichert mining operations are located. Thus, TCE contamination would not present a hazard to activities at that mining site. Soil is not contaminated at the location of the Grantline West mining activities.

Because construction and development activities would not occur under the No Project Alternative, there would be **no** project-related **direct** or **indirect** impacts related to potential exposure of construction workers or future residents to contaminated soil or groundwater. *[Lesser]*

Mitigation Measure: No mitigation measures are required.

IMPACT
3.13-2

Possible Delays in Development of Future Land Uses from Remediation Activities. *Ongoing remediation activities could delay or limit the availability of proposed land uses at or near the site of those remediation activities.*

PP, HD, IM,
NF

Soil and groundwater contamination at the project site has been delineated and remediation is ongoing or planned for the near future, based on monitoring, risk assessment, and remediation design. Ongoing remediation may delay or limit the availability of some proposed land uses at or near the contaminated sites. The severity of contamination or level of remediation effort at these sites may limit future land uses by the developers and future landowners to a certain extent. Regulatory review would ensure that any site-specific land use limitations are identified and required when the land is made available for development. Based on the results of Remedial Investigations conducted so far, DTSC may place limits on future land uses where appropriate through deed restrictions and easements on conveyances, and use restrictions on leases. Aerojet will also retain right of access to certain properties to operate and maintain the monitoring wells or to conduct other remediation activities.

This **direct** impact is considered **potentially significant**. There would be **no indirect** impacts. *[Similar]*

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. Remediation activities will continue at the project site while mining activities are occurring and will occur either with or without project development.

Because the project would not be implemented under this alternative, there would be no project-related potential delays to or interference with completion of remediation activities or proposed land uses; thus, **no direct** or **indirect** impacts would occur. *[Lesser]*

Mitigation Measure 3.13-2a: Require the Project Applicant(s) to Cooperate with Aerojet and Regulatory Agencies to Preserve, Modify, or Close Existing Groundwater Monitoring Wells.

PP, HD, IM,
NF

The project applicant(s) for all project phases shall submit copies of tentative maps for residential subdivisions and for nonresidential uses to Aerojet, DTSC, and the Central Valley RWQCB or any successor in interest for review and approval. Aerojet, DTSC, and the Central Valley RWQCB or any successor shall work with the project applicant(s) to establish the preservation, modification, or closure of existing groundwater wells. If necessary, Aerojet, MDC, or any successor may purchase lots from the project applicant(s) to maintain access to monitoring wells. Development shall not proceed until DTSC and the Central Valley RWQCB have approved Aerojet's or a successor's plan for well preservation, modification, or closure.

Timing: Before approval of tentative maps for all project phases.

Enforcement: California Department of Toxic Substances Control, Central Valley Regional Water Quality Control Board, Aerojet General Corporation, and City of Rancho Cordova Planning Department.

NP No mitigation measures are required.

Mitigation Measure 3.13-2b: Coordinate Development Activities to Avoid Interference with Remediation Activities.

PP, HD, IM, NF The project applicant(s) for all project phases shall provide notice to Aerojet or any successor in interest and DTSC, the Central Valley RWQCB, and the City of the location, nature, and duration of construction activities within each phase of development at least 1 month before the construction activities begin in areas on or near property with current or planned remediation activities. Before the approval of grading plans for all project phases, the project applicant(s) shall work with Aerojet, DTSC, and the Central Valley RWQCB or any successor to schedule the timing of construction activities to prevent potential conflicts with remediation activities.

Timing: Before the approval of grading plans and during construction activities for all project phases.

Enforcement: California Department of Toxic Substances Control, Central Valley Regional Water Quality Control Board, Aerojet General Corporation, and City of Rancho Cordova Planning Department.

NP No mitigation measures are required.

Mitigation Measure 3.13-2c: Notify the City in Writing that DTSC-Required Notification Obligations Regarding Deed Restrictions and/or Easements Have Been Fulfilled.

PP, HD, IM, NF Pursuant to its oversight over investigations of hazardous substances and determination of remedial action, DTSC establishes, as appropriate, deed restrictions (e.g., restrictions on future groundwater uses or future land uses) or easements (e.g., continued access to groundwater wells and pipelines) on property with associated notice requirements. The project applicant(s) for all such affected project phases shall provide notification in writing to the City that said required DTSC notification obligations have been fulfilled. Evidence of the method of notification required by DTSC shall be submitted to the City before approval of final maps and/or the issuance of permits for sales trailers and model homes. The project applicant(s) for such affected project phases shall coordinate with the City to include this provision as part of tentative map approval.

Timing: Before approval of final maps and/or issuance of permits for sales trailers and model homes for all project phases.

Enforcement: City of Rancho Cordova Planning Department.

NP No mitigation measures are required.

Implementation of Mitigation Measures 3.13-2a, 3.13-2b, and 3.13-2c would reduce the potentially significant impact from possible delays to or interference with completion of remediation activities and development of future land uses under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level.

**IMPACT
3.13-3**

Possible Exposure to Hazardous Building Materials. *Project implementation could result in potential exposure of construction workers to asbestos and/or lead-based paint as a result of demolition of existing on-site structures.*

PP, HD, IM,
NF

On-site structures were constructed with asbestos-containing building materials (e.g., insulation, transite sheeting) and lead-containing materials (e.g., paint, sealants, pipe solder), which could become friable or mobile during demolition activities and come into contact with construction workers, resulting in a health hazard. Potential project-related exposure of humans and the environment to ACMs and materials containing lead is considered a **potentially significant, direct** impact. **No indirect** impacts would occur. *[Similar]*

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City.

Because construction activities would not occur under this alternative, there would be no potential for project construction workers to be exposed to potentially harmful asbestos fibers or lead-containing materials; thus, **no direct** or **indirect** impacts would occur. *[Lesser]*

Mitigation Measure 3.13-3: Conduct a Hazardous-Building-Materials Study and Implement all Applicable Regulations.

PP, HD, IM,
NF

Before the approval of demolition permits for any existing on-site buildings, the project applicant(s) for all project phases except development Phase 1 shall hire a qualified consultant to investigate whether any of the existing on-site structures contain lead or ACMs that could become friable or mobile during demolition activities. If lead-containing materials or ACMs are found, the project applicant(s) shall coordinate with the County Environmental Management Department to ensure that such materials are properly removed (i.e., by an accredited inspector in accordance with EPA and Cal-OSHA standards). In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal-OSHA standards related to exposure of workers to asbestos and lead. The lead-containing materials and ACMs shall be handled properly and transported to an appropriate off-site disposal facility.

Timing: Before the approval of demolition permits for existing on-site structures and during all demolition activities for all project phases except development Phase 1.

Enforcement: County of Sacramento Environmental Management Department and City of Rancho Cordova Planning Department.

NP

No mitigation measures are required.

Implementation of Mitigation Measure 3.13-3 would reduce the potentially significant impact of possible exposure of construction workers to asbestos and/or lead-containing materials from the demolition of existing on-site structures under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level.

**IMPACT
3.13-4**

Use of Hazardous Materials On-Site. *Project implementation would involve the storage, use, and transport of hazardous materials at the project site during demolition, construction, and operation activities.*

PP, HD, IM,
NF

Development of the project site with residential and commercial uses would involve the storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, and solvents) during construction and demolition activities. In addition, commercial uses associated with project operation could include facilities such as gas stations and dry cleaners that could use and routinely transport hazardous materials on and off the project site. Direct impacts include those that could result from the use and transport of hazardous materials during construction activities. Indirect impacts include those that could result from future commercial operations on the project site that use, store, or transport hazardous materials. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and the California Department of Transportation, and use of these materials is regulated by DTSC, as outlined in Title 22 of the CCR. The project applicant(s), builders, contractors, business owners, and others would be required to use, store, and transport hazardous materials in compliance with federal, state, and local regulations during project construction and operation. Facilities that would use hazardous materials on-site after the project is constructed would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid releases of hazardous wastes. Because the project would implement and comply with existing hazardous-materials regulations, it is unlikely that impacts related to creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would occur with project development. Therefore, this direct impact is considered **less than significant**. **No indirect** impacts would occur. *[Similar]*

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. According to the *Aerojet Mining Amendment Mitigated Negative Declaration* (City of Rancho Cordova 2004) and the *Grantline West Mitigated Negative Declaration* (City of Rancho Cordova 2005), mining activities would not involve the routine transport of hazardous materials. Although mining activities would involve the use of oils, fuels, lubricants, and other potentially hazardous substances associated with equipment maintenance, these materials would be limited in quantity and would be stored off-site.

Because project development would not occur under this alternative, there would be no project-related risk associated with storage, use, or transport of hazardous materials; thus, **no direct or indirect** impacts would occur. *[Lesser]*

Mitigation Measure: No mitigation measures are required.

IMPACT
3.13-5

Potential Safety Hazards from Construction Activities and Mining Operations. *Ongoing project-related construction activities and nonproject-related mining operations could disrupt the surrounding residential and commercial uses and result in potential safety hazards to construction workers and residents.*

PP, HD, IM,
NF

As described in Chapter 2, “Alternatives,” project construction is anticipated to occur over five phases, which may or may not occur simultaneously, with the anticipated buildout in 25–30 years. Construction would require grading of the project site and development of new buildings and parking lots, utility relocations and installations, and roadway construction. Ongoing construction activities could result in some disruption of the surrounding residential and commercial uses and occur in proximity to existing development where people may be present.

Fenced construction staging areas would be established during each phase of Rio del Oro project development. These fenced staging areas would be used for storage of vehicles, equipment, materials, fuels, lubricants, and solvents. The stockpiling or vehicle staging areas would be

identified in the improvement plans and would be located as far as practical from developed land uses.

Aggregate mining operations would be ongoing during most phases of project construction, placing sensitive land uses (such as new residences and schools) adjacent to mining operations. The operation of heavy equipment, as well as excavation and transport of aggregate, could pose a safety hazard to these land uses. After completion of mining operations, each mining area would be developed according to the land use map. After completion of mining activities, all safety hazards associated with mining operations would be eliminated.

Even with the planned precautions listed above, construction activities and mining operations could result in hazards to residents and workers in the project area. Temporary potential safety hazards associated with construction activities and mining operations would be considered a **significant, direct** impact. **No indirect** impacts would occur. *[Similar]*

NP Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more individual Implementation Permits expected to be issued by the City. According to the *Aerojet Mining Amendment Mitigated Negative Declaration* (City of Rancho Cordova 2004) and the *Grantline West Mitigated Negative Declaration* (City of Rancho Cordova 2005), although the mining sites are within 2 miles of Mather Airport, they are not within the area covered by the *Mather Airport Comprehensive Land Use Plan*. Mining activities would have no effect on Mather Airport safety or operations, nor would they impair implementation of adopted County emergency response plans.

Because no development would occur under this alternative, there would be no project-related safety hazards associated with construction activities or mining operations; thus, **no direct** or **indirect** impacts would occur. *[Lesser]*

Mitigation Measure 3.13-5: Implement Public-Safety Features during Construction Activities and Mining Operations.

PP, HD, IM,
NF

The following public-safety protection features shall be implemented before the approval of grading plans and building permits for all project phases, and before the issuance of future mining permits:

- ▶ Temporary fencing shall be installed around construction areas with signage indicating the presence of an active construction zone, and warning the public to keep out.
- ▶ Temporary fencing shall be installed around mining areas with signage indicating the presence of active mining operations, and warning the public to keep out.
- ▶ Mining equipment shall not be operated and mining activities shall not occur within 1,100 feet of any noise-sensitive receptor, or within 375 feet if a temporary barrier is constructed in accordance with the following specifications:
 - The barrier shall be located as close to the noise source or as close to the receptor as possible and shall break the line of sight between the source and receptor.
 - The barrier shall be constructed with three-quarter-inch Medium Density Overlay (MDO) plywood sheeting, or other acceptable material having a surface weight of 2 pounds per square foot (lb/sf) or greater, and a demonstrated Sound Transmission Class

(STC) rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90.

- Weather- and abuse-resistant material shall be used for a temporary acoustical curtain. The material shall exhibit superior hanging and tear strength during construction with a surface weight of at least 1 lb/sf. The material shall have a minimum breaking strength of 120 pounds per inch (lb/in) per Federal Test Method Standard (FTMS) 191 A-M5102 and minimum tear strength of 30 lb/in per ASTM Test Method D117. Based on the same test procedures, the absorptive material facing shall have a minimum breaking strength of 100 lb/in and minimum tear strength of 7 lb/in. The material shall have a STC rating of 25 or greater, based on certified sound transmission loss data taken according to ASTM Test Method E90. It shall also have a Noise Reduction Coefficient (NRC) rating of 0.70 or greater, based on certified sound absorption coefficient data according to ASTM Test Method C423.
- The mating surfaces of the barrier sides shall be installed flush with each other. Gaps between barrier units, and between the bottom edge of the barrier panels and the ground, shall be closed with material that will completely close the gaps, and be dense enough to attenuate noise.

Timing: Before the approval of grading plans and building permits for all project phases, before issuance of future mining permits, and during all project construction for all project phases and mining activities.

Enforcement: City of Rancho Cordova Public Works Department and Building and Safety Department.

NP No mitigation measures are required.

Implementation of Mitigation Measure 3.13-5 would reduce the significant impact of possible public-safety hazards related to construction activities and mining operations under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level.

**IMPACT
3.13-6**

Human Health Hazards Associated with Mosquitoborne Diseases. *Construction workers or future residents could be exposed to an increased risk of mosquitoborne diseases.*

PP, HD, IM,
NF

While the project site is located within the Sacramento-Yolo Mosquito and Vector Control District and subject to District regulations, the City also requires that wetland mosquito management guidelines be incorporated into the design of water retention structures, drainage ditches, swales, and the construction of mitigated wetlands to reduce the potential for mosquitoborne disease transmission. Wetland features that would be constructed under the alternatives under consideration currently do not have mosquito management guidelines.

Although the mosquito controls applied by the District are considered to be appropriate and safe for human exposure, the project could result in a new risk of adverse health effects associated with vectorborne diseases or hazards associated with vector control, because new water-related sources of mosquito breeding habitat would be created, and the project currently does not have wetland mosquito management guidelines. Therefore, implementation of the Proposed Project, Impact Minimization, High Density, or No Federal Action Alternative would have a **potentially significant, direct** impact on human health related to mosquitoborne diseases. **No indirect** impacts would occur. *[Similar]*

NP Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more individual Implementation Permits expected to be issued by the City. However, mining activities would not create new sources of mosquito breeding habitat, and the project site would continue to fall within the District’s ongoing Integrated Pest Management program, which is designed to reduce human health risks associated with mosquitoborne diseases.

Therefore, because no new sources of mosquito breeding habitat would be created, and because mosquito controls applied by the District are considered to be appropriate and safe for human exposure, this would be considered a **less than significant, direct** impact. **No indirect** impacts would occur. *[Lesser]*

Mitigation Measure 3.13-6: Develop and Implement Site-Specific Wetland Mosquito Management Guidelines.

PP, HD, IM, NF Before the start of construction activities for all project phases, the project applicant(s) shall develop a set of site-specific Wetland Mosquito Management Guidelines. The guidelines shall be submitted to the City for review and approval. The project applicant(s) shall implement the guidelines once they have been approved.

Timing: Before the start of construction activities and as specified in the guidelines for all project phases.

Enforcement: City of Rancho Cordova Public Works Department and Building and Safety Department.

NP No mitigation measures are required.

Project Level (Phase 1) Impacts and Mitigation Measures

IMPACT 3.13-7

Possible Exposure to Contaminated Soil or Groundwater. *Construction workers or future residents would not be exposed to contaminated soil or groundwater during implementation of development Phase 1.*

PP, HD, IM, NF In 1997, DTSC issued a decision stating that the 1,100 acres of land encompassed by Rio del Oro development Phase 1 did not contain soils contaminated by either historical aerospace activities at the IRCTS or historical mining activities, and documenting that soil beneath the 1,100 acres was free of contaminants. This decision resulted in the removal of the 1,100 acres from the provisions of the DTSC ISEO for the IRCTS. Studies performed at the request of Aerojet (Borch 1995a, 1995b) found that the dredge tailings at the project site do not contain toxic levels of trace elements (such as mercury). Therefore, construction workers and future residents and employees associated with development Phase 1 would not come into contact with contaminated soil. To address DTSC concerns about the contaminated groundwater, Aerojet reserved all rights to water lying below the surface of the Phase 1 development area and granted easements to DTSC for the installation of monitoring wells, extraction wells, and pipelines to address the remediation of the contaminated groundwater. These deed restrictions prohibit uses of this groundwater for potable or irrigation-water supply wells without DTSC approval. Construction workers associated with development Phase 1 would not come into contact with contaminated groundwater because groundwater is typically approximately 125 feet below the current ground surface in the Phase 1 development area, and project-related excavation activities would not exceed depths of 15–20 feet. Therefore, there would be **no direct or indirect** impacts arising from human exposure to contaminated soil or groundwater. *[Similar]*

NP Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. Aerojet and MDC are required to address groundwater contamination underneath Phase 1 development land pursuant to DTSC and RWQCB requirements regardless of whether the project is implemented and regardless of whether mining is occurring. However, these groundwater cleanup efforts may not occur within Phase 1 land.

Because project-related construction and development would not occur under this alternative, there would be **no direct** or **indirect** impacts related to exposure of construction workers or future residents to contaminated soil or groundwater. *[Lesser]*

Mitigation Measure: No mitigation measures are required.

**IMPACT
3.13-8**

Possible Delays in Development of Future Land Uses from Remediation Activities. *Ongoing remediation activities could delay or limit the availability of proposed development Phase 1 land uses at or near the site of those remedial activities.*

Impacts under Phase 1 would be similar to those under the program level analysis (entire project site) for all alternatives. The Phase 1 area overlies the three groundwater operable units (WGOU, NGSA, and SGSA) and the GET F Sprayfield OU is located next to the northeastern corner of the Phase 1 development area. The other soil OUs are located east of the Phase 1 development area and would not be directly affected by implementation of development Phase 1. Refer to Impact 3.13-2 for further discussion of this impact.

Implementation of Mitigation Measures 3.13-2a, 3.13-2b, and 3.13-2c would reduce the potentially significant impact from possible delays or interference with completion of remediation activities and development of future land uses under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level.

**IMPACT
3.13-9**

Possible Exposure to Hazardous Building Materials. *Construction workers could be exposed to asbestos and/or lead-containing materials as a result of demolition of existing on-site structures during implementation of development Phase 1.*

PP, HD, IM, NF Because the land within the Phase 1 development area contains no buildings or structures, there would be no risk associated with exposure of construction workers to asbestos and/or lead-containing materials. Therefore, there would be **no direct** or **indirect** impacts. *[Similar]*

NP Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City.

Because construction of the project would not occur under this alternative, there would be no risk associated with exposure of construction workers to asbestos and/or lead-containing materials; thus, **no direct** or **indirect** impacts would occur. *[Lesser]*

Mitigation Measure: No mitigation measures are required.

**IMPACT
3.13-10**

Use of Hazardous Materials On-Site. *Implementation of development Phase 1 would involve the storage, use, and transport of hazardous materials at the project site during construction and operation activities.*

Impacts would be the same under Phase 1 as under the program (entire project site) level analysis for all alternatives. Refer to Impact 3.13-4 for further discussion of this impact.

**IMPACT
3.13-11**

Potential Safety Hazards from Construction Activities and Mining Operations. *Ongoing project-related construction activities and nonproject-related mining operations could result in disruption of the surrounding residential and commercial uses and result in potential safety hazards to construction workers and residents during implementation of development Phase 1.*

Impacts would be the same under Phase 1 as under the program (entire project site) level analysis for all alternatives. Refer to Impact 3.13-5 for further discussion of this impact.

Implementation of Mitigation Measure 3.13-5 would reduce the significant impact of possible public-safety hazards related to construction activities and mining operations under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level.

**IMPACT
3.13-12**

Human Health Hazards Associated with Mosquitoborne Diseases. *Construction workers or future residents associated with development Phase 1 could be exposed to an increased risk of mosquitoborne diseases.*

Impacts would be the same under Phase 1 as under the program (entire project site) level analysis for all alternatives. Refer to Impact 3.13-6 for further discussion of this impact.

Implementation of Mitigation Measure 3.13-6 would reduce the significant impact of possible public-health hazards related to mosquitoborne disease under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level.

CUMULATIVE IMPACTS

The Rio del Oro project would involve construction, demolition, and operation on land that is known to contain contaminated soil and groundwater. However, project implementation on 2,728 acres of the 3,828-acre site cannot occur until investigation and remediation of contaminants in soil and soil vapor have satisfied the requirements of DTSC and the Central Valley RWQCB. These requirements are intended to ensure that the residual concentrations of contaminants at the conclusion of cleanup activities do not pose a risk to human health and the environment. Therefore, significant health hazards to the public would not occur on either an individual project level or a cumulative basis.

Structures within the development area for Phases 2–5 contain asbestos and lead-containing materials. However, demolition of buildings containing these substances is regulated by EPA and Cal-OSHA, and the project includes a mitigation measure requiring compliance with these regulations. Therefore, the project would not contribute to cumulatively significant hazards to the public. It is assumed that construction of the related projects would also occur in accordance with these regulations; therefore, this impact would be considered less than significant on both an individual project basis and a cumulative basis.

The Rio del Oro project and the related projects would all involve the storage, use, disposal, and transport of hazardous materials (such as asphalt, fuel, lubricants, and solvents) to varying degrees during demolition, construction, and operation. Impacts related to these activities are considered less than significant under the Rio

del Oro project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, state, and local agencies, and it is assumed that those involved with the project would implement and comply with these existing hazardous-materials regulations. Therefore, the project would not contribute to cumulatively significant hazardous materials storage and transport impacts to the public. Because these laws and regulations would also apply to each related project, this impact would also be considered less than significant on a cumulative basis.

3.13.4 RESIDUAL SIGNIFICANT IMPACTS

With implementation of the mitigation measures listed above, project implementation would not result in any residual significant impacts related to hazards and hazardous materials.